

U. S. F. C.  
Records.

Nos. 858-901.

1880.

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

STATION RECORDS

Numbers 858 to 901

Copy.

L.

U. S. Fish Commission.

Dredging Records.

1880.

Locs. 858 to

Sept. 1 to

All bearings in this  
book are magnetic

Air temperatures taken  
by a Gal. Green Thermometer  
supplied by the Navy  
Department, and corrected  
within .5° of a deg. It was  
placed in the open  
field-house.

# Chester Rake Dredge.

## TEMPERATURE RECORD.

Instrument used, *Negretti-Gambr.*

Current number of observation, *858.*

Date, *Sept. 1, 1880.*

Locality, *Narragansett Bay*

Bearings, *Beaver Tail Lt., N. N. W.*

*1/4 N., 1/3 mile.*

Time of day, *1.05 P.M.*; of tide, *flood.*

State of sky, *clear.*

Temperature of air, *69.*

" surface of water, *63.* (*N. 3.42666*)

" at depth of *10* fathoms, *66.5* (*N. 3.40007.*)

" of bottom, *66.* (*N. 3.40007.*)

Depth, in fathoms, *14.*

Nature of bottom, *Shelly*

Direction of ~~surface current~~ *wind*, *S. E.*

Force of ~~surface current~~ *"*, *2.*

Direction of ~~bottom current~~ *Drift*, *E.*

*Dist* *"*, *1/4 mile.*

Name of vessel, *Fish Hawk.*

To what service attached, *U. S. F. C.*

Name and rank of commanding officer, *J. L. Tanner.*

*Lieut., U. S. N.*

Name and position of observer, *F. C. Vandikeit.*

*M. D.*

858

REMARKS.

Coarse sand. Broken shells.  
*Cancer borealis*.

Chester Rake Ore Dge  
TEMPERATURE RECORD.

Instrument used, *Regatta-Zambra*  
Current number of observation, *859.*  
Date, *Sept. 3, 1880.*  
Locality, *Vineyard Id.*  
Bearings, *Cullyhunk Light, N.  $\frac{1}{2}$  W.,  
3 miles.*  
Time of day, *11.20 a.m.*; of tide,  
State of sky, *Clear.*  
Temperature of air, *68°*  
" surface of water, *66. (N. 3. 46400.*  
" at depth of *5* fathoms, *65. (N. 3. 40007.*  
" of bottom, *63. "*  
Depth, in fathoms, *17  $\frac{1}{2}$*   
Nature of bottom, *sand.*  
Direction of ~~surface current~~ *wind* *S. W.*  
Force of ~~surface current~~ *"* *2.*  
Direction of ~~bottom current~~ *drift* *W.*  
Force of ~~bottom current~~ *dist.* *"*  *$\frac{1}{4}$  mile.*  
Name of vessel,  
To what service attached,  
Name and rank of commanding officer,  
Name and position of observer,

859.

REMARKS.

Net caught over rake  
Nothing in bag; but on rake  
*Ninos nigripes*  
*Pterocoloma* ?  
and in piece of lobster  
pot brought up large  
specimens of *Viridula*

Chester Rake Dredge  
TEMPERATURE RECORD.

Instrument used, *Regrett's Zambra*

Current number of observation, *860.*

Date, *Sept. 3, 1880.*

Locality, *Vineyard Sound.*

Bearings, *Pully Hunt Lt., N. 1/2 W.  
3 miles.*

Time of day, *11.55 am.*; of tide,

State of sky, *clear.*

Temperature of air, *70.*

" surface of water, *66. (N. 3. 46400)*

" at depth of *5* fathoms, *65.° (N. 3. 40007.*

" of bottom, *64.*

Depth, in fathoms, *17 1/2*

Nature of bottom, *mod.*

Direction of ~~surface current~~, *mod S. W.*

Force of ~~surface current~~, *2,*

Direction of ~~bottom current~~, *dip- W.*

*Dist.* " Force of ~~bottom current~~, *1/4 m.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

860

## REMARKS.

Bay nearly full, <sup>very</sup> fine sand.  
 slight accumulation of mud.  
 very rich in annelids and  
 amphipods, and Mollusks

*Merluccius bilinearis*



Trawl  
TEMPERATURE RECORD.

Instrument used, *Negretti-Zambra*

Current number of observation, *861.*

Date, *Sept. 22, 1880*

Locality, *Vineyard Is.*

Bearings, *Cuttyhunk Is., N. 3/4 N.,  
3 3/4 miles.*

Time of day, *12, 20 P.M.*; of tide,

State of sky, *Clear.*

Temperature of air, *69.*

*N. 3.*  
*40007* " surface of water, *66.* (*N. 3, 46400.*)  
" at depth of *5* fathoms, *65.* (*10 f. - 65*)  
" of bottom, *61.* (*N. 3, 40007.*)

Depth, in fathoms, *17.*

Nature of bottom, *sand.*

Direction of ~~surface current~~ *wind S. N.*

Force of ~~surface current~~ *2.*

Direction of ~~bottom current~~ *Drift S.*

*Dist.* " *1/4 mile.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

861.

REMARKS.

*Suberites compacta*?  
*Soligo Reali*  
*Homarus Americanus*,  
*Asterias vulgaris*  
*Pecten tenuicostatus*  
*Eupagurus Bernhardtii*  
*Platyschisma ocellatus*,  
*Cancer borealis*  
" *lividus*  
*Pinnothere maculatus* in *Pecten*

# TEMPERATURE RECORD.

Instrument used, *Regretté-Zambra*

Current number of observation, *862?*

Date, *Sept. 3<sup>d</sup> 1880.*

Locality, *Vineyard Sound.*

Bearings, *Cuttyhunk Light.*  
*North, 4 miles.*

Time of day, *12.55 P.M.*; of tide,

State of sky, *Clear.*

Temperature of air, *68.*

" surface of water, *66 (N. 3. 46400*

" at depth of *5* fathoms, *65. (N. 3. 40007.*

" of bottom, *64* "

Depth, in fathoms, *17.*

Nature of bottom, *Sand.*

Direction of ~~surface~~ *wind* current, *S. W.*

Force of ~~surface~~ " *2.*

Direction of ~~bottom~~ *drift* current, *S.*

*Dist. drift* Force of bottom ~~current~~, *1/4 m.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

862

REMARKS.

*Platyonichus ocellatus*

*Eupogonius barakhardi*

*Cancer borealis*

*Homarus americanus*

*Loligo* ?

*Cicada sanguinolenta*  
only a few of each, above

*Asterias vulgaris* 2

*Suberites compacta* ?

# TEMPERATURE RECORD.

Instrument used, *Regatta-Zambra,*

Current number of observation, *863,*

Date, *Sept. 3, 1880.*

Locality, *Vineyard Is.*

Bearings, *Cullthuntz St., N.  $\frac{1}{8}$  E.  
3  $\frac{3}{4}$  miles.*

Time of day, *1.40 P.M.*; of tide, *flood.*

State of sky, *Clear*

Temperature of air, *70.*

" surface of water, *67. (N.B. 42600.*

*N.B. 40007.* " at depth of *10* fathoms, *65° (57. 65°)*

" of bottom, *65 (N.B. 40007.*

Depth, in fathoms, *18.*

Nature of bottom, *mud,*

Direction of ~~surface~~ *wind* current, *S. N.*

Force of ~~surface~~ *"* current, *2,*

Direction of ~~bottom~~ *drift* current, *S.*

*2.5* " Force of ~~bottom~~ *"* current,  *$\frac{1}{4}$  mile*

Name of vessel,

To what service attached.

Name and rank of commanding officer,

Name and position of observer,

863,

REMARKS.

Same as 860, very rich.  
*Goldia limatula*, very large.

2 read 9-  
TEMPERATURE RECORD.

Instrument used, *Regretté-Zambra*

Current number of observation, *864.*

Date, *Sept. 3, 1880.*

Locality, *Vineyard Is.*

Bearings, *Lay Head St., S. S. W.  $\frac{7}{8}$  N.*  
*5  $\frac{6}{10}$  miles.*

Time of day, *3 P.m.* ; of tide, *flood.*

State of sky, *clear.*

Temperature of air, *70.*

" surface of water, *67.* (*n. 3. 46400*)

" at depth of *5* fathoms, *66.* (*n. 3. 40007*)

" of bottom, *65.* "

Depth, in fathoms, *13.*

Nature of bottom, *sand.*

Direction of ~~surface current~~ *wind* *S. W.*

Force of ~~surface current~~ *"* *2.*

Direction of ~~bottom current~~ *drift* *S.*

Force of ~~bottom current~~ *"* *1/4 m.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

864.

REMARKS.

Sand and broken shells



# TEMPERATURE RECORD.

Instrument used, *Regatta-Zambra*  
 Current number of observation, *865*  
 Date, *Sept. 4, 1880*  
 Locality, *Atlantic*  
 Bearings, *Lat. 40° 05' N,*  
*Long. 70° 23. West.*  
 Time of day, *5.40 am*; of tide,  
 State of sky, *Clear*  
 Temperature of air, *71*  
 " surface of water, *73*, (*N.B. 46400*  
 " at depth of *5* fathoms, *75*, (*N.B. 46401*  
 " of bottom, *68.5* (*N.B. 46401*  
 Depth, in fathoms, *65*  
 Nature of bottom, *Compact fine sand mud.*  
 Direction of ~~surface~~ *wind* current, *var.*  
 Force of ~~surface~~ *drift* current, *1*  
 Direction of ~~bottom~~ *drift* current, *E. N. E.*  
 Force of ~~bottom~~ *drift* current, *3/4 mile*  
 Name of vessel.  
 To what service attached.  
 Name and rank of commanding officer,  
 Name and position of observer,

## REMARKS.

do T. lead, and Negretti Zambra thermometers  
by passing fine.  
The heavy, on short beam.  
The other two up to 100  
The other two up to 100

*Peristedium* from spec.

A heavy swell, the  
ship rolling violently at  
times.

The Negretti-Zambra thermom-  
eters are not reliable for  
bottom and intermediate  
temperatures, frequently being  
affected by rolling of the  
ship.

J. L. Tanner.

# TEMPERATURE RECORD.

Instrument used, *Regretté Zambra*  
 Current number of observation, *866.*  
 Date, *Sept. 4. 1880.*  
 Locality, *Atlantic*  
 Bearings, *Lat. 40° 05' 18" N,*  
*Long. 70° 22' 18" W.*  
 Time of day, *6.30 am*; of tide,  
 State of sky, *Clear,*  
 Temperature of air, *73.*  
 " surface of water, *73. N. 3. 46400*  
 " at depth of *5* fathoms, *74.5. (N. 3. 46401*  
 " of bottom, *68.5 (?)* "  
 Depth, in fathoms, *65.*  
 Nature of bottom, *fine sand & mud.*  
 Direction of ~~surface~~ *wind* current, *Var.*  
 Force of ~~surface~~ *surf* current, *1. - 0.*  
 Direction of ~~bottom~~ *Dir* current, *N. E. by E.*  
 Force of ~~bottom~~ *Dir* current, "  
 Name of vessel,  
 To what service attached,  
 Name and rank of commanding officer,  
 Name and position of observer, *Dr. F. L. Van Dine*

REMARKS.

# TEMPERATURE RECORD.

Instrument used, *Regretté-Zambra*

Current number of observation, *867.*

Date, *Sept. 4, 1880.*

Locality, *Atlantic*

Bearings, *Lat. 40° 05' 42" N.*  
*Long. 70° 22' 06. W.*

Time of day, *7.04 a.m.*; of tide.

State of sky, *Clear.*

Temperature of air, *75.*

" surface of water, *73.* (*N. 3. 46400*  
*46401.*

" at depth of *5* fathoms, *75°* (*N. 3. 46400*  
*46401.*

" of bottom, *53°* (*N. 3. 46400*  
*46401.*

Depth, in fathoms, *64,*

Nature of bottom, *Sand and mud.*

Direction of ~~surface~~ <sup>*wind*</sup> current, *Calm.*

Force of surface current,

Direction of ~~bottom~~ <sup>*surf.*</sup> current, *E. S. E.*

Force of ~~bottom~~ <sup>*surf.*</sup> current, *2/4 miles.*

Name of vessel,

To what service attached.

Name and rank of commanding officer,

Name and position of observer, *J. L. Tanner*

867.

REMARKS.

Compact Hard  
Salt and broken shells.

Trawl  
TEMPERATURE RECORD.

Instrument used *Regatta Zambra*  
Current number of observation, *868.*  
Date, *Sept. 4, 1880.*  
Locality, *Atlantic*  
Bearings, *Lat. 40° 01' 42" N.,*  
*Long. 70° 22' 30" W.*  
Time of day, *8.23 am;* of tide,  
State of sky, *Clear.*  
Temperature of air, *75.*  
" surface of water, *75° (N.B. 46400.*  
" at depth of *5* fathoms, *75. (N.B. 46401.*  
" of bottom, *47.* "  
Depth, in fathoms, *162.*  
Nature of bottom, *fine sand & black specks.*  
Direction of ~~surface current~~ *wind*, *calm.*  
Force of surface current,  
Direction of ~~bottom current~~ *drift*, *N. N. E.*  
*drift* "  
~~Force of bottom current~~ *4 x surface*  
Name of vessel,  
To what service attached,  
Name and rank of commanding officer,  
Name and position of observer, *J. d. Tanner.*

868

REMARKS.

7 m. 167 into *Thalassidroma*  
*terrestris* from bottom.  
 but *Sulphur* ? from under -  
 ground.



Trawl

TEMPERATURE RECORD.

Instrument used, *Regretté-Zambra*.

Current number of observation, *8691*.

Date, *Sept. 4, 1880*.

Locality, *Atlantic*

Bearings, *Lat. 40° 02' 18" N.*

*Long. 70° 23' 06. N.*

Time of day, *9.27 am*; of tide,

State of sky, *Clear*,

Temperature of air, *80*,

" surface of water, *76*. (*N. 3. 46400*,

" at depth of *5* fathoms, *75* (*N. 3. 46401*,

" of bottom, *50 (?)* "

Depth, in fathoms, *192*.

Nature of bottom, *fine sand*.

Direction of ~~surface~~ *wind* current, *calm*

Force of surface current.

Direction of ~~bottom~~ *drift* *N. N. E.*

~~Force of bottom current.~~ *drift* *1/2 mile*

Name of vessel,

To what service attached.

Name and rank of commanding officer,

Name and position of observer, *J. L. Tanner*

869.

REMARKS.

Very dark.  
F. my inter genes.

870. Frazil

TEMPERATURE RECORD.

Instrument used, *Regatta Zambra*

Current number of observation, *870.*

Date, *Sept. 4, 1880.*

Locality, *Atlantic.*

Bearings, *Lat. 40° 02' 36" N,*  
*Long. 70° 22' 58" W.*

Time of day, *10.50 a.m.* of tide,

State of sky, *Clear.*

Temperature of air, *80.*

" surface of water, *77* (N.B. 46400.

" at depth of *5* fathoms, *75.* (N.B. 46401.

" of bottom, *No obs.*

Depth, in fathoms, *155.*

Nature of bottom, *fine sand.*

Direction of ~~surface current~~ *wind* *Calm*

Force of surface current.

Direction of ~~surface current~~ *drift* *N. by N.*

~~Force of surface current~~ *drift* *1 mile*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer, *J. L. Tanner*

8-70.

REMARKS.

Empty 107 57 1/2 ft.

# TEMPERATURE RECORD.

Instrument used *Regatta-Zambra*

Current number of observation, *871*

Date, *Sept, 4, 1880.*

Locality, *Atlantic*

Bearings-*Lat. 40° 2' 54" N. } Lon. 70° 23' 40" W.*

*(Lat. merid. obs. 40° 04' 57" N.)*

Time of day, *11.40* <sup>air</sup> of tide.

State of sky, *Clear.*

Temperature of air, *84*

*N. 3, 46401* } surface of water, *76.5* (*N. 3. 46400.*)  
 at depth of *5* fathoms, *75.* (*10 f. 75°*)  
 of bottom, *49.* (*N. 3, 46401*)

Depth, in fathoms, *115.*

Nature of bottom, *fine sand.*

Direction of <sup>*wind*</sup> surface current, *calm.*

Force of surface current, *"*

Direction of <sup>*drift*</sup> bottom current, *N. N. W.*

Force of bottom current, *3/4 mile.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer, *J. d. Tanner*

Sy

Trawl.

TEMPERATURE RECORD.

Instrument used *Regatta-Gamtra*

Current number of observation. *872.*

Date. *Sept, 4, 1880.*

Locality. *Atlantic.*

Bearings. *Lat. 40° 05' 39" N*

*Long. 70° 23' 52" W.*

Time of day. *12.45 P.M.* of tide,

State of sky. *Partially clear.*

Temperature of air. *81.*

" surface of water. *77 (N.B. 46400.*

" " *5 fathoms. 75. (N.B. 46407.*

" of bottom. *50, 5. "*

Depth, in fathoms, *86.*

Nature of bottom. *Sand, gravel, shells, sponges,*

Direction of surface ~~current~~ *Drift. South.*

Force of surface current. *1.*

Direction of ~~bottom~~ *Drift. N. N. by N.*

Force of bottom current. *1/2 mile*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer, *J. A. Smith.*

372

REMARKS.

55



# TEMPERATURE RECORD.

Instrument used, *Negretti-Zambra*

Current number of observation, *873.*

Date, *Sept. 13, 1880.*

Locality, *Atlantic.*

Bearings, *Lat. 40° 02' N.*

*Long. 70° 57' W*

Time of day, *5.36 am.*; of tide,

State of sky, *clear.*

Temperature of air, *68.*

*N. 3. 46400.* surface of water, *69.5 (N. 3. 46404*  
 " at depth of *5* fathoms, *70° (10 f. 70°*  
 " of bottom, *51.* *N. 3. 46400.*

Depth, in fathoms, *100.*

Nature of bottom, *mud.*

Direction of ~~surface~~ *und* current, *S. W.*

Force of ~~surface~~ *"* current, *3.*

Direction of ~~bottom~~ *drift* current, *N. W. by N.*

Force of bottom ~~current~~ *drift*, *1/2 mile.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

# REMARKS.

Nov. 875 8 77 Left home,  
 and very similar to  
 character throughout,  
 and with some of the  
 same as on page 87  
 life, Two of the birds  
 had been killed in the  
 but it was all the same.

# TEMPERATURE RECORD.

Instrument used. *Regatta Zumbra*

Current number of observation. *877.*

Date, *Sept. 13, 1888.*

Locality, *Atlantic*

Bearings, *Lat. 40° N.*

*Long. 70° 57' W.*

Time of day, *6.26 am*; of tide,

State of sky, *clear*

Temperature of air. *70°*

*70* surface of water. *70 (N. 3 + 6404.*  
*40400* at depth of *5* fathoms. *70.5° (10 f. 70° X*  
 of bottom, *51.* *(N 9. 46400*

Depth, in fathoms, *85.*

Nature of bottom, *mud.*

Direction of *min* *S. W.*

Force of surface current. *2.*

Direction of *drift* *N. W.*

Force of bottom current, *1/2 mile.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

*224. 64° - 447. 55°*

REMARKS.

# TEMPERATURE RECORD.

Instrument used, *Repetit - Zambra*

Current number of observation, *875.*

Date, *Sept. 13, 1880.*

Locality, *Atlantic.*

Bearings, *Lat. 39° 57' N.*

*Long. 70° 57' 20" W.*

Time of day, *7.51 am*; of tide,

State of sky, *clear.*

Temperature of air, *70.*

*N3,* " surface of water, *70.* *N. 3. 46404.*  
*46400.* at depth of *5* fathoms, *71° (10 f. 70° x*  
 " of bottom, *53,* *N 3. 46400.*

Depth, in fathoms, *126.*

Nature of bottom, *mud.*

Direction of ~~surface~~ *wind* *S. W.*

Force of ~~surface~~ *"* *2.*

Direction of ~~bottom~~ *Drift* *N. E.*

*Six,* " *1/2 mile*

Name of vessel.

To what service attached.

Name and rank of commanding officer,

Name and position of observer,

*20 f. 69° - 30 f. 54°*

REMARKS.

Trawl

TEMPERATURE RECORD.

Instrument used. *Requiti-Zambra*

Current number of observation, *876.*

Date, *Sept. 13, 1880.*

Locality, *Atlantic.*

Bearings, *Lat. 39° 57' N.*

*Long. 70° 56' W.*

Time of day, *8.45 am.*; of tide,

State of sky, *clear.*

Temperature of air, *68*

*N.B. 46400.* surface of water, *70.* (*N.B. 46404*  
at depth of *5* fathoms, *71.* (*10 f. 70° x*  
of bottom, *58.* *N.B. 46400.*

Depth, in fathoms, *120.*

Nature of bottom, *mud,*

Direction of ~~surface current~~ *wind*, *S. W.*

Force of ~~surface current~~, *2.*

Direction of ~~bottom current~~ *Drift*, *N.*

*Dist.* " *2 1/4 miles*

Name of vessel,

To what service attached.

Name and rank of commanding officer,

Name and position of observer,

\* *20 f. 69° = 30 f. 54°.*

REMARKS.

4



F. R. R. R.  
TEMPERATURE RECORD.

Instrument used, *Regretté Zambra.*

Current number of observation, *877.*

Date, *Sept. 13, 1880.*

Locality, *Lat. 39° 56' N.*

Bearings, *Long. 70° 54' 18" W.*

Time of day, *9.40 am*; of tide,

State of sky, *clear.*

Temperature of air, *71.*

" surface of water, *71. (N. 3, 46 40 4*

*N. 3, 46 40 00* " at depth of *5* fathoms, *78° (107. 66°*

" of bottom, *57.* *N. 3, 46 40 00.*

Depth, in fathoms, *126.*

Nature of bottom, *mud.*

Direction of ~~surface~~ *wind* current, *S. N.*

Force of ~~surface~~ *2.* current,

Direction of ~~bottom~~ *trip* current, *N. N. N.*

*Dist. "* *3/4 m.*

Name of vessel.

To what service attached.

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

# Trawl

## TEMPERATURE RECORD.

Instrument used, *Regatta-Zambra and Miller-Casella.*

Current number of observation, *878.*

Date, *Sept, 13, 1880.*

Locality, *Atlantic.*

Bearings, *Lat. 39° 55' N,*  
*Long. 70° 54' 15" W.*

Time of day, *11 am.*; of tide,

State of sky, *cloudy.*

Temperature of air, *72.*

" surface of water, *71. (N.S. 46404,*

" at depth of *5* fathoms *N.S. 70. 5 10 fms. 70. X*  
*m.c. 66. 5 10 fms. 70.*

" of bottom, *52. N.S. 46400,*

Depth, in fathoms, *48. m.c.*  
*142 1/2*

Nature of bottom, *mud.*

Direction of ~~surface~~ *wind* current, *S. W.*

Force of ~~surface~~ *"* current, *2*

Direction of ~~bottom~~ *Drift* current, *E. N. W.*

Force of ~~bottom~~ *Drift* current, *3/4 m.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

*X*  
*2 of N.S. 55.*  
*2 of m.c. 55-*

REMARKS.

# Trawl

## TEMPERATURE RECORD.

Instrument used, *Regatta Trawl & Miller Casella*

Current number of observation, *879*

Date, *Sept. 13, 1880.*

Locality, *Atlantic.*

Bearings, *Lat. 39° 49' 30" N,  
Long. 70° 54' W.*

Time of day, *1.20 P.M.*; of tide,

State of sky, *Cloudy.*

Temperature of air, *73.*

surface of water, *71.5. N. 3. 46 404,*  
at depth of *5* fathoms, *N. 3. 71, 10 N. 3. 71, x*  
*N. 3. 46 400* of bottom, *N. 3. 42, m.c. 68 } m.c. 70*  
*N. 3. 42, m.c. 42*

Depth, in fathoms, *225*

Nature of bottom, *sand & blue mud.*

Direction of *wind*, *S. W.*

Force of *surface* current, *3.*

Direction of *drift*, *N. by N.*

*dist*, *"*, *3/4 m.*

Name of vessel.

To what service attached.

Name and rank of commanding officer,

Name and position of observer,

*\* Log N. 3. 70.  
V. m.c. 70.*

879.

REMARKS.

Large quantities of the  
worm tubs.  
Boreas Fossils  
Arctica ~~Arctica~~ ?

*Trawl*  
TEMPERATURE RECORD.

Instrument used.

*Allen Casella,*  
*Agretti Zamora and*

Current number of observation. *880.*

Date. *Sept. 13, 1880.*

Locality. *Atlantic*

Bearings. *Lat. 39° 48' 30" N,*  
*Long. 70° 54' W*

Time of day. *3.12 PM;* of tide.

State of sky. *Cloudy.*

Temperature of air. *74.*

" surface of water. *71.5 (M.S. 46402*

" at depth of *5* fathoms. *M.S. 74, 168 } 10 fms. 72*

" of bottom. *M.S. 43, 41.5 - } M.S. 46400*

Depth, in fathoms, *25 2 1/2 -*

Nature of bottom. *fine*

Direction of ~~surface~~ <sup>*surface*</sup> current. *S, W.*

Force of ~~surface~~ <sup>*"*</sup> current. *3*

Direction of ~~bottom~~ <sup>*bottom*</sup> current. *W. by N.*

Force of ~~bottom~~ <sup>*"*</sup> current. *3/4 m.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

S 80.

REMARKS.

Very Rich. Large quantities  
of O. o. vella. and big  
brown lichen.

Bolocera T. v. d. d. c.  
In the ...  
in the ...



T. 1111,  
**TEMPERATURE RECORD.**

Instrument used, *Reynolds' thermometer*  
*Thermometer*

Current number of observation, *881*

Date, *Sept. 13. 1880.*

Locality, *Atlantic*

Bearings, *Lat. 39° 46' 30" N.*  
*Long 70° 54' W.*

Time of day, *5 PM*; of tide,

State of sky, *Cloudy*

Temperature of air, *70.*

" surface of water, *71.703, 46.4, 41.1*

" at depth of *5* fathoms, *71.5, 66, 106, 71.5*

" of bottom, *M. S. 42*

Depth, in fathoms, *328.*

Nature of bottom,

Direction of ~~surface~~ *surface* current, *S. by E*

Force of ~~surface~~ *surface* current, *3*

Direction of ~~bottom~~ *bottom* current, *N. by E*

Force of ~~bottom~~ *bottom* current, *1/2*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

887,

REMARKS.

Small fanned, and the little  
came up.

Acadella.

Archartia ? 2/2.

Mitred octopus.

Urticina medusa ?

A very rich section  
a p. medusa.

Trawl.  
TEMPERATURE RECORD.

Instrument used. ~~88~~ Negretti Zamboni  
Current number of observation, 882  
Date, Sept. 17, 1880.  
Locality, Narragansett Bay  
Bearings, N. N. E.  $\frac{1}{2}$  E.  
2  $\frac{3}{8}$  miles.  
Time of day, 10.56 <sup>AM</sup>; of tide,  
State of sky, Clear.  
Temperature of air, 68,  
" surface of water, 65° (N. 3. 46 + 02  
" at depth of fathoms,  
" of bottom, 67. (N. 3. 46 + 00  
Depth, in fathoms, 12  $\frac{1}{2}$   
Nature of bottom, mud.  
Direction of ~~surface current~~, wind S. W.  
Force of ~~surface current~~, " 2.  
Direction of ~~bottom current~~, drift, S. W.  
~~Distance~~  
Force of ~~bottom current~~, "  $\frac{1}{4}$  mile  
Name of vessel,  
To what service attached.  
Name and rank of commanding officer,  
Name and position of observer,



Trawl

## TEMPERATURE RECORD.

Instrument used, *Negetti-Zambra*

Current number of observation, *883.*

Date, *Sept. 17.*

Locality, *Narragansett Bay.*

Bearings, *Halfway Rock N. E. by N., 2 1/4 miles.*

Time of day, *11, 35<sup>am</sup>*; of tide,

State of sky, *clear.*

Temperature of air, *70*

" surface of water, *65 (N. 3, 46402*

" at depth of fathoms,

" of bottom, *63 1/2 (N. 3, 46400*

Depth, in fathoms, *13.*

Nature of bottom, *mud.*

Direction of ~~surface current~~, *wind S. W.*

Force of ~~surface current~~, *" 2.*

Direction of ~~bottom current~~, *Drift S. W.*

Force of ~~bottom current~~, *Drift " 1/2 m.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

888.

REMARKS.

About same things as in 884.

*Homarus americanus*.

*Callinectes*.

*Libinia*.

*Libinia*.

# Chester Lake Bridge

## TEMPERATURE RECORD.

Instrument used, *Reynolds thermometer*  
 Current number of observation, *884*  
 Date, *Sept. 12, 1900*  
 Locality, *Narragansett Bay*  
 Bearings, *Hope I, N. E. 1/2 E.*  
*20-0-4 or 30.*  
 Time of day, *2.10 P.M.*; of tide,  
 State of sky, *Clear.*  
 Temperature of air, *72*  
 " surface of water, *65*, (*N. 46402*)  
 " at depth of \_\_\_\_\_ fathoms,  
 " of bottom, *63.5* (*N. 46400*)  
 Depth, in fathoms, *5*  
 Nature of bottom, *mud*  
 Direction of ~~surface current~~, *Wind, S. W.*  
 Force of ~~surface current~~, *" 3.*  
 Direction of ~~bottom current~~, *Drift - S. W.*  
*Drift*, *" 1/4 m.*  
 Force of ~~bottom current~~,  
 Name of vessel,  
 To what service attached,  
 Name and rank of commanding officer,  
 Name and position of observer,

**REMARKS.**



Officer Trawling  
TEMPERATURE RECORD.

Instrument used, *Repetit Zumbra*  
Current number of observation, *885*  
Date, *Sept. 17, 1880.*  
Locality, *Namaganate Bay*  
Bearings, *Point S. N. by E.  $\frac{3}{4}$  E.*  
*3/8 mile*  
Time of day, *3.15 P.M.*; of tide,  
State of sky, *Clear.*  
Temperature of air, *71.* (*Ny. 46402*)  
" surface of water, *69.*  
" at depth of *5* fathoms, *64* (*Ny. 46400*)  
" of bottom, *65* "  
Depth, in fathoms, *16.*  
Nature of bottom, *mud & shells.*  
Direction of ~~surface current~~, *Wind S. W.*  
Force of ~~surface current~~, " *2.*  
Direction of ~~bottom current~~, *Drift S.*  
Force of ~~bottom current~~, " *1/4 m.*  
Name of vessel,  
To what service attached,  
Name and rank of commanding officer,  
Name and position of observer,

REMARKS.

Dredge

# TEMPERATURE RECORD.

Instrument used, *Repeating Thermometer*

Current number of observation, *88*

Date, *Sept. 21,*

Locality, *off Black Pt*

Bearings, *South St, Block I. N. 2/4 W,  
5 3/4 miles.*

Time of day, *12.49 P.M.* of tide,

State of sky, *Clear.*

Temperature of air, *67.*

" surface of water, *64 (11.3, 46402*

" at depth of *5* fathoms, *62 (11.3, 46400.*

" of bottom, *62,* "

Depth, in fathoms, *19.*

Nature of bottom, *Shells.*

Direction of surface current, *wind from*

Force of surface current, " *2.*

Direction of bottom current, *drift - N.*

Force of bottom current, " *1/4 mi*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,



Trawl.

## TEMPERATURE RECORD.

Instrument used. *Regatta Zambra*

Current number of observation. *887.*

Date, *Sept 7, 21*

Locality, *Off 1360 etc S.*

Bearings. *South 51° E, 1360 S. 71° 21' W.*  
*6 3/4 miles*

Time of day, *1.30 PM.*; of tide,

State of sky, *Clear*

Temperature of air, *67.*

" surface of water, *64* (*W. 4640.*)

" at depth of *5* fathoms, *62* (*W. 4640.*)

" of bottom, *62* "

Depth, in fathoms, *19.*

Nature of bottom, *Shells.*

Direction of surface current, *drift NW.*

Force of surface current, " *2*

Direction of bottom current, *drift NW.*

Force of bottom current, " *3/4 m.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

887. 4. 1. 1.

## REMARKS.

like form.

*Sechinagossin.* 10

1776 - 1777

2nd. 1881. 1882. 1883.

Adams

Trawl.  
TEMPERATURE RECORD.

Instrument used. *Regatta Zambra*

Current number of observation, *880.*

Date, *Sept. 21, 1880.*

Locality, *off Block I.*

Bearings. *South Light Block I.*  
*N. by E., 6 miles.*

Time of day, *2 P.M.*; of tide.

State of sky, *Clear.*

Temperature of air, *68*

" surface of water, *64* (*W. 46402*)

" at depth of *5* fathoms, *62* (*W. 46400*)

" of bottom, *62* "

Depth, in fathoms, *19.*

Nature of bottom, *Shells.*

Direction of ~~surface current~~. *Wind. W.*

Force of ~~surface current~~. " *3.*

Direction of ~~bottom current~~, *Drift W.*

~~Force of bottom current~~. " *1 1/2 m.*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

886 3111.

**REMARKS.**

Same as last very fine.



*Dredge*  
TEMPERATURE RECORD.

Instrument used, *Reynolds' pump*  
Current number of observation, *889*  
Date, *Sept. 21*  
Locality, *off Block I.*  
Bearings, *South Light Block I.,*  
*N. 1/4 S. 5 miles.*  
Time of day, *3.50 PM*; of tide,  
State of sky, *clear.*  
Temperature of air, *68*  
" surface of water, *64 (11.3, 46402)*  
" at depth of *5* fathoms, *62 (11.3, 46400)*  
" of bottom, *61.5* "  
Depth, in fathoms, *11*,  
Nature of bottom, *Rocky.*  
Direction of surface current, *low N.*  
Force of surface current, " *3.*  
Direction of ~~bottom~~ current, *drift N. S. W.*  
*Drift*  
Force of ~~bottom~~ current, " *1/2 m*  
Name of vessel,  
To what service attached,  
Name and rank of commanding officer,  
Name and position of observer,

# REMARKS.

Aug 2 1881, Lorne Rocks.

*Dredge*

## TEMPERATURE RECORD.

Instrument used, *Reynolds' Janbra*

Current number of observation, *890.*

Date, *Sept. 21, 1880.*

Locality, *off Block I,*

Bearings, *South Light Block I,*

*N.  $1/4$  S.  $4\frac{3}{4}$  miles,*

Time of day, *4.15 P.M.* of tide,

State of sky, *Clear.*

Temperature of air, *68,*

" surface of water, *64. (N. 46402)*

" at depth of *5* fathoms, *62 (N. 46400)*

" of bottom, *61.5 (N. 46400)*

Depth, in fathoms, *11*

Nature of bottom, *Rocky,*

Direction of ~~surface current~~, *Wind N.*

Force of ~~surface current~~, *" 3*

Direction of ~~bottom current~~, *Drift N. S. W*

Force of ~~bottom current~~, *"  $1/2$  m*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

## REMARKS.

$\frac{d}{dt} \left( \frac{1}{\rho} \right) = - \frac{1}{\rho^2} \frac{d\rho}{dt}$

Trawl  
TEMPERATURE RECORD.

Instrument used, *Refractometer*  
Current number of observation, *891*  
Date, *Oct. 2, 1880*  
Locality, *Atlantic*  
Bearings, *Lat. 39° 46' N*  
*Long. 71° 10' W*  
Time of day, *6 am*; of tide,  
State of sky, *Clear*  
Temperature of air, *60*  
" surface of water, *67*  
" at depth of fathoms,  
" of bottom,  
Depth, in fathoms, *Sounding line broke at 310 +*  
Nature of bottom, *mud*  
Direction of ~~surface current~~, *wind NE*  
Force of ~~surface current~~, " *3*  
Direction of ~~bottom current~~, *Drift NE*  
*Drift* Force of ~~bottom current~~, " *1/2 m*  
Name of vessel,  
To what service attached,  
Name and rank of commanding officer,  
Name and position of observer,

891.

REMARKS.

Soft brown mud.

Not much variety, but  
abundant of small shells etc.  
Foraminifera. 3 or 4 small pebbles.

The sounding for No 892 -  
was 45 fathoms and  
this is probably the depth  
of the bar also

Long by observation  
Lat. by Do (noon)

Trawl  
TEMPERATURE RECORD.

Instrument used, *Refractometer*  
Current number of observation, *892*  
Date, *Oct. 2. 1890*  
Locality, *Atlantic,*  
Bearings, *Lat. 39° 46' N*  
*Long. 71° 05' W.*  
Time of day, *8:46 am*; of tide,  
State of sky, *Clear.*  
Temperature of air, *64.*  
" surface of water, *65.*  
" at depth of fathoms,  
" of bottom, *Loose sand when at surface*  
Depth, in fathoms, *487.*  
Nature of bottom,  
Direction of ~~surface current~~, *Wind N.E.,*  
Force of ~~surface current~~, *" 3,*  
Direction of ~~bottom current~~, *Drift N.N.E.,*  
*Dist* Force of ~~bottom current~~, *" 2 miles,*  
Name of vessel,  
To what service attached,  
Name and rank of commanding officer,  
Name and position of observer,

REMARKS.

2. 1. 1900.  
Sun. 2. 1. 1900. 2. 1. 1900.



Trawl

# TEMPERATURE RECORD.

Instrument used, ~~Refractometer~~

Current number of observation, 893

Date, Oct. 2, 1880,

Locality, Atlantic

Bearings, Lat.  $39^{\circ} 52' 20''$  N.  
Long.  $70^{\circ} 58'$  W.

Time of day, 11.23 am of tide,

State of sky, Clear

Temperature of air, 63

" surface of water, 64

" at depth of fathoms,

" of bottom, 40, m.c.

Depth, in fathoms, 372

Nature of bottom, mud.

Direction of surface current, Wind N.E.,

Force of surface current, " 3'

Direction of bottom current, Drift - N.,

Force of bottom current, " 1 mile

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,



Trawl

# TEMPERATURE RECORD.

Instrument used, *Miller Casella*  
Current number of observation, *894*  
Date, *Oct. 2, 1880*  
Locality, *Atlantic*  
Bearings, *Lat. 39° 53' N*  
*Long. 70° 58' 30" W.*  
Time of day, *1.10 PM*; of tide,  
State of sky, *Clear*  
Temperature of air, *63.*  
" surface of water, *64.*  
" at depth of fathoms,  
" of bottom, *40. m.c.*  
Depth, in fathoms, *365.*  
Nature of bottom, *Sand*  
Direction of ~~surface current~~ *Wind NE,*  
Force of ~~surface current~~ *" 3*  
Direction of ~~bottom current~~ *Drift N,*  
~~Force of bottom current.~~ *2 m.*  
Name of vessel,  
To what service attached,  
Name and rank of commanding officer,  
Name and position of observer,

*Long. by observation*

REMARKS.

Mud and small stones  
very Rich

Fram  
TEMPERATURE RECORD.

Instrument used, *Miller Cavella*  
Current number of observation, *895*  
Date, *Oct. 2, 1880*  
Locality, *Atlantic*  
Bearings, *Lat 39° 36' 30" N*  
*Long. 70° 59' 45" W*  
Time of day, *3.17 P.M.*; of tide,  
State of sky, *Clear*  
Temperature of air, *62*  
" surface of water, *65*  
" at depth of fathoms,  
" of bottom, *42 M.C.*  
Depth, in fathoms, *238*  
Nature of bottom, *Mud*  
Direction of surface current, *Wind N.W.*  
Force of surface current, *" S.*  
Direction of bottom current, *Drift N*  
*S.E.*  
Force of bottom current, *1 1/2 mi*  
Name of vessel,  
To what service attached,  
Name and rank of commanding officer,  
Name and position of observer,

*Long. by observation*

# REMARKS.

Left port about 2 hrs.  
midnight. Filabellum  
Good. Motion etc.  
1000 lbs.  
Sea & waves etc.  
Very Rich

*Trawl*  
TEMPERATURE RECORD.

Instrument used,

Current number of observation,

*896.*

Date,

*Nov. 16, 1880.*

Locality,

Bearings,

*Lat. 37° 26' N.*

*Long. 74° 19' W.*

*(19')*

Time of day,

; of tide,

State of sky,

Temperature of air,

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms, *56.*

Nature of bottom, *Sand, shells.*

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.



*Frank*  
TEMPERATURE RECORD.

Instrument used,

Current number of observation,

*897.*

Date, *Nov. 16, 1880.*

Locality,

Bearings, *Lat. 37° 25' N*  
*Long. 74° 18' W.*

Time of day, ; of tide,

State of sky,

Temperature of air,

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms, *15 7/2*

Nature of bottom, *fine, mud*

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

*Frank*  
TEMPERATURE RECORD.

Instrument used,

Current number of observation,

*898.*

Date, *Nov. 16, 1880.*

Locality,

Bearings, *Lat. 37° 24' N.*

*Long. 74° 17' W.*

Time of day, ; of tide,

State of sky,

Temperature of air.

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms, *3 or 4 fathoms?*

Nature of bottom, *Mud.*

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

*1000*  
TEMPERATURE RECORD.

Instrument used,

Current number of observation, *899.*

Date, *Nov, 16, 1880,*

Locality,

Bearings, *Lat. 37° 22' N.*  
*Long. 74° 29' W.*

Time of day, ; of tide,

State of sky,

Temperature of air.

" surface of water.

" at depth of fathoms,

" of bottom,

Depth, in fathoms, *57 1/2*

Nature of bottom, *fine sand.*

Direction of surface current.

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

*Trawl*  
TEMPERATURE RECORD.

Instrument used,

Current number of observation, *900.*

Date, *Nov. 16, 1880.*

Locality,

Bearings, *Lat. 37° 19' N*  
*Long. 74° 41' W.*

Time of day, ; of tide,

State of sky,

Temperature of air,

“ surface of water,

“ at depth of fathoms,

“ of bottom,

Depth, in fathoms, *31.*

Nature of bottom, *sand*

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.



*Frank,*  
TEMPERATURE RECORD.

Instrument used,

Current number of observation, *901.*

Date, *Nov. 16. 1880.*

Locality,

Bearings, *Lat. 37° 10' N*  
*Long 75° 08' W.*

Time of day, ; of tide,

State of sky,

Temperature of air,

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms, *18,*

Nature of bottom, *sand.*

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

*— Close year 1880 —*

## REMARKS.